

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055172

Luminaire Tested: S122R3DR-S290D830-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055172
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S290D830-X4F0-XX-UDD-FLL-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

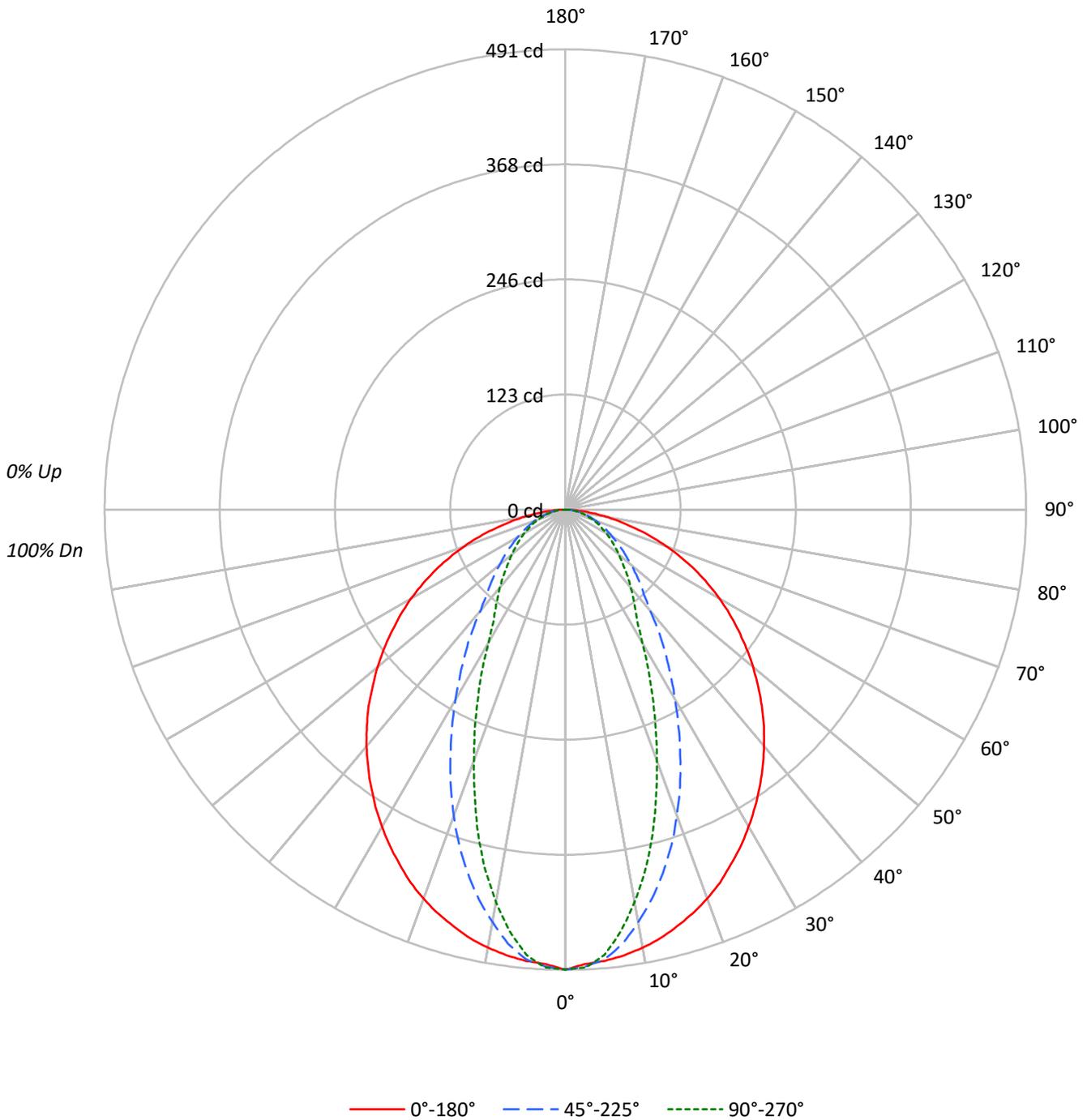
Lumens per Lamp: N/A
Luminaire Lumens: 742.2 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 97 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 71 | 65 | 61 | 68 | 64 | 60 | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 46 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 9 | 62 | 50 | 43 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 |
| 10 | 59 | 47 | 39 | 35 | 58 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9297 | 9297 | 9297 |
| 5° | 9192 | 9159 | 9074 |
| 10° | 9132 | 8596 | 8184 |
| 15° | 9028 | 7877 | 7041 |
| 20° | 8907 | 7006 | 5748 |
| 25° | 8730 | 6054 | 4589 |
| 30° | 8545 | 5115 | 3581 |
| 35° | 8349 | 4279 | 3007 |
| 40° | 8147 | 3470 | 2678 |
| 45° | 7936 | 3033 | 2395 |
| 50° | 7702 | 2685 | 2190 |
| 55° | 7439 | 2424 | 2031 |
| 60° | 7180 | 2209 | 1898 |
| 65° | 6841 | 2022 | 1784 |
| 70° | 6343 | 1889 | 1684 |
| 75° | 5615 | 1713 | 1588 |
| 80° | 4790 | 1615 | 1473 |
| 85° | 3304 | 1435 | 1348 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7936 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.0 | 6.1 |
| 10°-20° | 113.5 | 15.3 |
| 20°-30° | 139.9 | 18.8 |
| 30°-40° | 134.2 | 18.1 |
| 40°-50° | 115.8 | 15.6 |
| 50°-60° | 89.8 | 12.1 |
| 60°-70° | 61.5 | 8.3 |
| 70°-80° | 33.4 | 4.5 |
| 80°-90° | 9.2 | 1.2 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 298.4 | 40.2 |
| 0°-40° | 432.6 | 58.3 |
| 0°-60° | 638.1 | 86.0 |
| 0°-90° | 742.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 742.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 491 | 491 | 491 | 491 | 491 | |
| 5° | 483 | 490 | 482 | 476 | 477 | 46 |
| 15° | 460 | 446 | 402 | 369 | 359 | 130 |
| 25° | 418 | 373 | 290 | 236 | 220 | 192 |
| 35° | 361 | 286 | 185 | 138 | 130 | 226 |
| 45° | 296 | 199 | 113 | 94 | 89 | 228 |
| 55° | 225 | 120 | 73 | 64 | 62 | 202 |
| 65° | 153 | 65 | 45 | 41 | 40 | 151 |
| 75° | 77 | 30 | 23 | 22 | 22 | 82 |
| 85° | 15 | 7 | 7 | 7 | 6 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 490.7 | 490.7 | 490.7 | 490.7 | 490.7 |
| 2.5° | 485.3 | 493.5 | 487.8 | 487.8 | 489.0 |
| 5° | 483.3 | 490.2 | 481.6 | 475.5 | 477.1 |
| 7.5° | 479.6 | 484.5 | 467.3 | 454.1 | 453.7 |
| 10° | 474.7 | 475.1 | 446.8 | 429.5 | 425.4 |
| 12.5° | 468.5 | 461.9 | 425.8 | 400.0 | 393.8 |
| 15° | 460.3 | 446.4 | 401.6 | 368.8 | 359.0 |
| 17.5° | 451.7 | 430.4 | 375.8 | 334.8 | 321.2 |
| 20° | 441.8 | 411.1 | 347.5 | 300.7 | 285.1 |
| 22.5° | 430.8 | 392.6 | 319.2 | 267.9 | 251.5 |
| 25° | 417.6 | 372.9 | 289.6 | 236.3 | 219.5 |
| 27.5° | 404.9 | 352.8 | 261.3 | 208.4 | 191.2 |
| 30° | 390.6 | 331.1 | 233.8 | 181.7 | 163.7 |
| 32.5° | 376.2 | 308.9 | 208.4 | 156.3 | 142.8 |
| 35° | 361.0 | 286.4 | 185.0 | 137.8 | 130.0 |
| 37.5° | 345.4 | 264.2 | 162.9 | 125.5 | 118.6 |
| 40° | 329.4 | 242.0 | 140.3 | 113.6 | 108.3 |
| 42.5° | 313.0 | 220.3 | 124.7 | 103.8 | 98.9 |
| 45° | 296.2 | 199.4 | 113.2 | 93.5 | 89.4 |
| 47.5° | 278.1 | 178.5 | 102.2 | 84.9 | 81.2 |
| 50° | 261.3 | 158.4 | 91.1 | 77.1 | 74.3 |
| 52.5° | 243.3 | 138.7 | 82.0 | 70.2 | 67.7 |
| 55° | 225.2 | 119.8 | 73.4 | 63.6 | 61.5 |
| 57.5° | 207.6 | 101.7 | 65.2 | 57.4 | 55.8 |
| 60° | 189.5 | 87.4 | 58.3 | 51.7 | 50.1 |
| 62.5° | 171.1 | 75.9 | 51.7 | 46.4 | 44.7 |
| 65° | 152.6 | 65.2 | 45.1 | 41.0 | 39.8 |
| 67.5° | 133.3 | 55.0 | 39.4 | 36.1 | 35.3 |
| 70° | 114.5 | 45.9 | 34.1 | 31.2 | 30.4 |
| 72.5° | 96.0 | 37.3 | 28.7 | 26.7 | 25.8 |
| 75° | 76.7 | 29.9 | 23.4 | 22.2 | 21.7 |
| 77.5° | 59.9 | 23.4 | 18.9 | 18.1 | 17.6 |
| 80° | 43.9 | 17.2 | 14.8 | 13.9 | 13.5 |
| 82.5° | 29.1 | 11.9 | 10.7 | 10.3 | 9.8 |
| 85° | 15.2 | 7.4 | 6.6 | 6.6 | 6.2 |
| 87.5° | 4.9 | 3.3 | 3.3 | 3.3 | 2.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)